

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/586,788	GABRIC ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	NIKOLAY YUSHIN	2893	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview dated 02/24/2010.
2. ☒ The allowed claim(s) is/are 21 -30, 32 -38.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>03/01/2010</u>.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|---|--|

/NIKOLAY YUSHIN/  
Examiner, Art Unit 2893

## **DETAILED ACTION**

### ***Continued Examination under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/24/2010 has been entered.

### ***Status of Claims***

Applicant's amendment of claims 21, 22, 25, 29, 30 and 32 in the reply filed on 02/24/2010 is acknowledged.

Claims 21 -30 and 32 -38 are under consideration in this Office Action.

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Brian Carlson (Slater & Matsil, L.L.P.) on 03/01/2010.

The application has been amended as follows:

Claim 22. The semiconductor structure as claimed in claim 21, ~~[[wherein]]~~ the layer of including a compound comprising silicon, oxygen and nitrogen comprises  $\text{Si}_{1.0\ 0}\text{O}_{1.90}\text{H}_{0.27}\text{C}_{0.045}$

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N<sub>0.06</sub>, wherein each of the index numbers (1.00, 1.90, 0.27, 0.045, 0.06) is variable by 20% upwards or downwards.

Claim 25. The semiconductor structure as claimed in claim 21, ~~[[wherein]]~~ the layer including a compound comprising silicon, oxygen and nitrogen has been formed by a plasma-enhanced chemical vapor deposition process with nitrogen material being supplied during the supply of silicon material and oxygen material by means of an organic silicon precursor material.

Claim 30. The method as claimed in claim 29, ~~[[wherein]]~~ the layer including a compound comprising silicon, oxygen and nitrogen comprises Si<sub>1.0 0</sub>O<sub>1.90</sub>H<sub>0.27</sub>C<sub>0.045</sub> N<sub>0.06</sub>, wherein each of the index numbers (1.00, 1.90, 0.27, 0.045, 0.06) is variable by 20% upwards or downwards.

Claim 32. A semiconductor structure comprising: two electrically conductive structures over a substrate, a subarea between the two electrically conductive structures being free of material; a layer including a compound comprising silicon, oxygen and nitrogen overlying the two electrically conductive structures, ~~[[wherein]]~~ the layer including a compound comprising silicon, oxygen and nitrogen comprises Si<sub>1.0 0</sub>O<sub>1.90</sub>H<sub>0.27</sub>C<sub>0.045</sub> N<sub>0.06</sub>, wherein each of the index numbers (1.00, 1.90, 0.27, 0.045, 0.06) is variable by 20% upwards or downwards.

***Allowable Subject Matter***

Claims 21 -30 and 32 – 38 are allowed.

The following is an examiner's statement of reasons for allowance:

In re Claim 21, prior-art fails to disclose a semiconductor structure comprising of "a layer including a compound comprising silicon, oxygen and nitrogen overlying the two electrically

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conductive structures...” Therefore, the claimed device differs from prior art devices on this point and there is no evidence it would have been obvious to make this change.

In re Claim 29, prior-art fail to disclose a method comprising a steps of forming”...a layer including a compound comprising silicon, oxygen and nitrogen .” Therefore, the claimed method differs from prior art methods on this point and there is no evidence it would have been obvious to make this change.

In re Claim 32, prior-art fails to disclose a semiconductor structure comprising of “...the layer including a compound comprising silicon, oxygen and nitrogen comprises  $\text{Si}_{1.0\ 0}\text{O}_{1.90}\text{H}_{0.27}\text{C}_{0.045}\text{N}_{0.06}$ , wherein each of the index numbers (1.00, 1.90, 0.27, 0.045, 0.06) is variable by 20% upwards or downwards...” Therefore, the claimed device differs from prior art devices on this point and there is no evidence it would have been obvious to make this change.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIKOLAY YUSHIN whose telephone number is (571)270-7885. The examiner can normally be reached on Monday through Thursday from 8 a.m. to 5 p.m. EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Davienne Monbleau can be reached on 571-272-1945. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NIKOLAY YUSHIN/  
Examiner, Art Unit 2893

/Thomas L Dickey/  
Primary Examiner, Art Unit 2826

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